



Benchmark Cost Proxy Model Release 3.1

Transport Model Inputs

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**Developed by
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Sprint and U S WEST**

Preface

The purpose of this document is to discuss the definition, value, source and rationale for the individual inputs for BCPM 3.1. This edition includes information on the Transport module inputs. Descriptions of inputs associated with the other modules contained in BCPM 3.1 are provided in their respective Model Inputs documents.

A more general discussion of the inputs for the other modules of BCPM 3.1 can be found in the BCPM 3.1 Model Methodology.

TRANSPORT MODEL INPUTS

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Default Transport Tables

The input values supplied with BCPM 3.1 represent what the sponsors consider to be reasonable representative values for these inputs. The defaults are provided for the convenience of users who may not have access to more specific data. They are based upon observations and the judgement of BCPM subject matter experts. The BCPM Sponsors do not represent the provided values as necessarily appropriate for every potential serving area. We recommend that the user replace these values with state and company specific inputs whenever available.

1 Manual Inputs Table

1.1 Maximum Number of Nodes on a Ring (MaxNodes)

1.1.1 Definition

This variable determines the maximum number of nodes on a ring (including the Host).

1.1.2 Default Input Value

Maximum Number of Nodes on a Ring (MaxNodes)
12

1.1.3 Source

We recommend that the user request this data if possible. The number of nodes may be limited by the choice of SONET multiplexing equipment. Consult the SONET equipment vendor's documentation. Telco engineering departments may have data or practices that can be used.

1.1.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. Alcatel indicates a maximum of 16 nodes per OC-48 ring (Alcatel, *Product Description: 1648 SM OC-48 SONET Multiplexer*). AT&T documentation indicates a typical ring size of 4 to 6 nodes for appropriate bandwidth utilization, with a maximum of 16 on an OC-48 ring (AT&T Communications, *AT&T Local Transport Network Design*, September, 1997). The BCPM Sponsors used 12 as a representative number of nodes on an OC-48 ring.

1.2 Air to Route Factor (ARFactor)

1.2.1 Definition

A multiplier used to increase airline mileage distances to estimate the cable route mileage distance.

1.2.2 Default Input Value

Air to Route Factor
1.410

1.2.3 Source

We recommend that the user request this data if possible. Telco engineering departments may have data or practices that can be used.

1.2.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. We recommend an Air to Route Factor in the range of 1.4 to 1.6 depending on local geography.

1.3 Line to Trunk Factor (LTFactor)

1.3.1 Definition

The ratio of subscriber lines to DS0 umbilical links (6:1) between each remote and its host.

1.3.2 Default Input Value

Line to Trunk Factor
6

1.3.3 Source

We recommend that the user request this data if possible. The input selected should reflect the total amount of interoffice traffic (local and toll) generated by the remote as well as any supervisory umbilical traffic generated by intra-remote calling. BCPM assumes no direct end-office to end-office trunking from remotes. Telco engineering departments may have data or practices that can be used.

1.3.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.4 Tandem Trunk Factor (TTFactor)

1.4.1 Definition

The ratio of subscriber lines to DS0 trunks (10:1) between each host and its tandem. This input is used to size the host-tandem SONET rings. The input selected should reflect the total

amount of interoffice traffic (local and toll) generated by the host as well as any subtending remotes.

1.4.2 Default Input Value

Tandem Trunk Factor
10

1.4.3 Source

We recommend that the user request this data if possible. Telco engineering departments may have data or practices that can be used. The number of subscriber lines to consider is the number terminated on the host office (do not include lines on subtending remotes).

1.4.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.5 Special Access Factor (SPFactor)

1.5.1 Definition

The percentage of subscriber lines in proportion to the number of switched access lines.

1.5.2 Default Input Value

Special Access Factor
5%

1.5.3 Source

We recommend that the user request this data if possible. A good source is the Telco's billing records. Telco engineering departments may have data or practices that can be used.

1.5.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.6 Max. Repeater Spacing (RepeaterDist)

1.6.1 Definition

The number of miles at which point a SONET signal regenerator is required between two wire centers on a SONET ring.

1.6.2 Default Input Value

Max. Repeater Spacing (Miles)
40

1.6.3 Source

We recommend that the user request this data if possible. The appropriate value for this input is dependent upon the SONET terminal equipment selected and input for the study. Telco engineering departments may have data or practices that can be used.

1.6.4 Rationale

Typically, OC-48 SONET terminals can support spacing of approximately 30 to 65 miles depending upon the terminal vendor and model selected. This input was chosen to be consistent with the default equipment assumed by BCPM.

1.7 Minutes of Use Per DS1

1.7.1 Definition

The average number of minutes a month for a DS1.

1.7.2 Default Input Value

Minutes of Use Per DS1
216,000

1.7.3 Source

This input is referenced in the FCC Order 96-325, Paragraph 822, Footnote 1949.

1.7.4 Rationale

The 216,000 MOU per DS1 is equal to 9,000 MOU per DS0 times 24 voice-grade circuits per DS1, as assumed by the FCC.

1.8 Route Diversity Switch for Two Point Rings (RDSWitch)

1.8.1 Definition

Determines the level of route diversity on a two point "folded" ring. An input of N recognizes the use of a single sheath and installation of a fiber optic cable (one fiber optic cable). An input of Y recognizes separate sheath and installation of fiber optic cables (two fiber optic cables).

1.8.2 Default Input Value

Route Diversity Switch for Two Point Rings (RDSWitch)
N

1.8.3 Source

We recommend that the user request this data if possible. Telco engineering departments may have data or practices that can be used.

1.8.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.9 Percent of Interoffice MOUs that are EAS (EASPct)

1.9.1 Definition

Determines the portion of transport facilities cost that is directly attributable to USF. This input should represent the *portion of interoffice traffic* that is associated with local service and mandatory Extended Area Service (EAS) which is included in the basic service rate. This input should include the percentage of interoffice traffic that is associated with transport when an exchange has multiple wire centers within a single local exchange.

1.9.2 Default Input Value

EASPct
25%

1.9.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.9.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.10 Used to Identify 'like' Tandem (CLLIMatch)

1.10.1 Definition

This input is used in the process of identifying the homing relationship of a remote to its host and hosts to its tandem.

1.10.2 Default Input Value

CLLIMatch
7

1.10.3 Source

Bellcore Practice, BR 751-100-460, Common Language Switching System Code

1.10.4 Rationale

This input represents CLLI character reference to a building location.

1.11 Mileage Equipment Aerial Fiber (per fiber mile) (MEAerialFiber)

1.11.1 Definition

Represents the average utilization associated with fiber.

1.11.2 Default Input Value

Mileage Equipment Aerial Fiber
75%

1.11.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.11.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.12 Mileage Equipment Underground Fiber (per fiber mile) (MEUndergroundFiber)

1.12.1 Definition

Represents the average utilization associated with fiber.

1.12.2 Default Input Value

Mileage Equipment Underground Fiber
75%

1.12.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.12.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.13 Mileage Equipment Buried Fiber (per fiber mile) (MEBuriedFiber)

1.13.1 Definition

Represents the average utilization associated with fiber.

1.13.2 Default Input Value

Mileage Equipment Buried Fiber
75%

1.13.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.13.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.14 Fiber Pole Factor (FiberPoleFactor)

1.14.1 Definition

Represents a multiplier used to add the cost of poles when aerial cable construction is required.

1.14.2 Default Input Value

Fiber Pole Factor
.23

1.14.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.14.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. With the application of this multiplier, every dollar of aerial fiber the costing model utilizes, the model will add the value of this multiplier in pole investment.

1.15 Fiber Conduit Factor (FiberConduitFactor)

1.15.1 Definition

Represents a multiplier used to add the cost of conduit when underground cable construction is required.

1.15.2 Default Input Value

Fiber Conduit Factor
.45

1.15.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.15.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. With the application of this multiplier, every dollar of underground fiber the costing model utilizes, the model will add the value of this multiplier in conduit investment.

1.16 Miscellaneous Equipment & Power Factor (PowerAndEquipmentFactor)

1.16.1 Definition

Represents a multiplier used to add the cost of miscellaneous equipment and power when central office equipment is installed.

1.16.2 Default Input Value

Miscellaneous Equipment and Power Factor
.06

1.16.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.16.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. With the application of this multiplier, every dollar of circuit investment the costing model utilizes, the model will add the value of this multiplier in miscellaneous equipment and power investment.

1.17 Sheath Sharing Factor (SheathSharingFactor)

1.17.1 Definition

Represents a multiplier used to reduce the cost associated with fiber sheath and installation to reflect sharing among multiple transport systems utilizing the same fiber facility associated with a self-healing SONET rings.

1.17.2 Default Input Value

Sheath Sharing Factor
.68

1.17.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.17.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.18 Two Point Sheath Sharing Factor (TwoPointSheathSharingFactor)

1.18.1 Definition

This input represents a multiplier, which is used to reduce the cost associated with fiber sheath and installation to reflect sharing among multiple transport systems utilizing the same fiber facility associated with two point folded SONET rings. This input is only used when the input RDSWitch is equal to "N". See input documentation item 1.8 for definition.

1.18.2 Default Input Value

Two Point Sheath Sharing Factor
.5

1.18.3 Source

We recommend that the user request specific study to obtain this data if possible. Telco engineering departments may have data or practices that can be used.

1.18.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.19 Fiber Mix – Aerial (FiberMixAerial)

1.19.1 Definition

Percentage of aerial fiber construction the module will utilize in the development of interoffice transport.

1.19.2 Default Input Value

Fiber Mix – Aerial
5%

1.19.3 Source

We recommend that the user request specific data if possible. Telco engineering departments may have data or practices that can be used.

1.19.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.20 Fiber Mix – Underground (FiberMixUnderground)

1.20.1 Definition

Percentage of underground fiber construction the module will utilize in the development of interoffice transport.

1.20.2 Default Input Value

Fiber Mix – Underground

30%

1.20.3 Source

We recommend that the user request specific data if possible. Telco engineering departments may have data or practices that can be used.

1.20.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.21 Fiber Mix – Buried (FiberMixBuried)

1.21.1 Definition

Percentage of buried fiber construction the module will utilize in the development of interoffice transport.

1.21.2 Default Input Value

Fiber Mix – Buried
65%

1.21.3 Source

We recommend that the user request specific data if possible. Telco engineering departments may have data or practices that can be used.

1.21.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts.

2 Table Inputs

2.1 Ring Size Table Toggle

2.1.1 Definition

This input is used to determine the size of the SONET systems that are available for the model to choose from as a costing option. An input of 1 indicates this ring size is a valid costing option.

2.1.2 Default Input Value

Ring Size Table	
Toggle	Size
1	OC3 x 1
1	OC12 x 1
1	OC12 x 2
1	OC48 x 3
1	OC48 x 4
1	OC48 x 5
1	OC48 x 6
1	OC48 x 7
1	OC48 x 8
1	OC48 x 9

2.1.3 Source

Telco engineering departments may have engineering practices/procedures, that can be used.

2.1.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

2.2 Ring Size Table Planning Threshold %

2.2.1 Definition

Determines the planning threshold at which a larger capacity terminal for the ring will be utilized.

2.2.2 Default Input Value

Ring Size Table	
Planning Threshold %	Size
57.5%	OC3 x 1
57.5%	OC12 x 1
57.5%	OC12 x 2
57.5%	OC48 x 3
57.5%	OC48 x 4
57.5%	OC48 x 5
57.5%	OC48 x 6
57.5%	OC48 x 7
57.5%	OC48 x 8
57.5%	OC48 x 9

2.2.3 Source

Telco engineering departments may have engineering practices/procedures, that can be used.

2.2.4 Rationale

This input represents the judgement and experience of BCPM sponsor company subject matter experts. The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

2.3 Fiber Tip Cable (Per Fiber) Investment - Material

2.3.1 Definition

The list material cost associated with fiber tip cable on a per fiber basis. Tip cable is used to connect fiber entering the office via the cable vault to the fiber patch panel in the equipment room.

2.3.2 Default Input Value

Fiber Tip Cable (Per Fiber) Investment – Material
\$ 50

2.3.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.4 Fiber Patch Panel (Per Fiber)

2.4.1 Definition

The list material cost associated with fiber patch panel on a per fiber basis. Fiber Patch Panel is used to connect fiber entering the office via the cable vault to the fiber terminal in the equipment room.

2.4.2 Default Input Value

Fiber Patch Panel (Per Fiber)
\$ 29

2.4.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.5 SONET Terminal Shelf (OC3)

2.5.1 Definition

The list material cost associated with SONET Terminal Shelf (OC3). The SONET Terminal Shelf (OC3) includes all of the terminals common equipment. The common equipment would include items such as the shelf, high-speed optics, common cards, software and an allocation of spares.

2.5.2 Default Input Value

SONET Terminal Shelf (OC3)
\$ 27,204

2.5.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.6 SONET Terminal (OC3) – DS3 Card

2.6.1 Definition

The list material cost associated with SONET Terminal (OC3) – DS3 Card. The SONET Terminal (OC3) – DS3 Card is for a single DS3 including a second card for protection.

2.6.2 Default Input Value

SONET Terminal (OC3) – DS3 Card
\$ 3,742

2.6.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.7 SONET Terminal (OC3) – DS1 Card

2.7.1 Definition

The list material cost associated with a SONET Terminal (OC3) – DS1 Card. The SONET Terminal (OC3) – DS1 Card input is on a per DS1 basis, including any common related cards and protection associated with a single DS1 connection.

2.7.2 Default Input Value

SONET Terminal (OC3) – DS1 Card
\$ 272

2.7.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.8 SONET Terminal Shelf (OC12)

2.8.1 Definition

The list material cost associated with SONET Terminal Shelf (OC12). The SONET Terminal Shelf (OC12) includes all of the terminals common equipment. The common equipment

would include items such as the shelf, high-speed optics, common cards, software and an allocation of spares.

2.8.2 Default Input Value

SONET Terminal Shelf (OC12)
\$ 44,922

2.8.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.9 SONET Terminal (OC12) – OC3 Card

2.9.1 Definition

The list material cost associated with SONET Terminal (OC12) – OC3 Card. The SONET Terminal (OC12) – OC3 Card for a single OC3 including a second card for protection.

2.9.2 Default Input Value

SONET Terminal (OC12) – OC3 Card
\$ 9,454

2.9.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.10 SONET Terminal (OC12) – 3 DS3 Card

2.10.1 Definition

The list material cost associated with SONET Terminal (OC12) – 3 DS3 Card. The SONET Terminal (OC12) – 3 DS3 Card is for 3 DS3's including protection.

2.10.2 Default Input Value

SONET Terminal (OC12) – 3 DS3 Card
\$4,404

2.10.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.11 SONET Terminal Shelf (OC48)

2.11.1 Definition

The list material cost associated with SONET Terminal Shelf (OC48). The SONET Terminal Shelf (OC48) includes all of the terminals common equipment. The common equipment would include items such as the shelf, high-speed optics, common cards, software and an allocation of spares.

2.11.2 Default Input Value

SONET Terminal Shelf (OC48)
\$ 83,936

2.11.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.12 SONET Terminal (OC48) - OC3 Card

2.12.1 Definition

The list material cost associated with SONET Terminal (OC48) – OC3 Card. The SONET Terminal (OC48) – OC3 Card for a single OC3 including a second card for protection.

2.12.2 Default Input Value

SONET Terminal (OC48) – OC3 Card
\$ 18,581

2.12.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.13 SONET Terminal (OC48) – 3 DS3 Card

2.13.1 Definition

The list material cost associated with SONET Terminal (OC12) – 3 DS3 Card. The SONET Terminal (OC12) – 3 DS3 Card is for 3 DS3's including protection.

2.13.2 Default Input Value

SONET Terminal (OC48) – 3 DS3 Card
\$ 5,884

2.13.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.14 DSX3 Cross Connect Shelf

2.14.1 Definition

The list material cost associated with a DSX3 Cross Connect Shelf. The DSX3 Cross Connect Shelf is used when DS3's are interconnected from an interoffice terminal to another ring or to the local distribution network. The input provided is associated with a 16 DS3 DSX3 Cross Connect Shelf or a DS1 capacity of 448 (16 * 28).

2.14.2 Default Input Value

DSX3 Cross Connect Shelf
\$ 310

2.14.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.14 DSX3 Cross Connect Card

2.14.1 Definition

This is the list material cost associated with a DSX3 Cross Connect Card. The DSX3 Cross Connect Module/Card fit into the DSX3 Cross Connect Shelf and are on a per DS3 basis.

2.14.2 Default Input Value

DSX3 Cross Connect Card
\$ 256

2.14.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.15 DSX1 Cross Connect Jack Field

2.15.1 Definition

The list material price for a DSX1 Cross Connect Jack Field. The DSX1 Cross Connect Jack Field is used when DS1's are interconnected from an interoffice terminal to another ring or to the local distribution network. The input provided is associated with a 56 DS1's DSX1 Cross Connect Jack Field.

2.15.2 Default Input Value

DSX1 Cross Connect Jack Field
\$ 1,620

2.15.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.16 Channel Bank Shelf

2.16.1 Definition

The list material cost associated with a Channel Bank Shelf. The Channel Bank shelf is used when DS0's are being handed off from an interoffice terminal to another ring or to the local

distribution network. The input provided is associated with a 2 DS1 Channel Bank Shelf and does not include any channel bank cards.

2.16.2 Default Input Value

Channel Bank Shelf
\$ 4,000

2.16.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.17 Channel Bank Card

2.17.1 Definition

The list material cost associated with a Channel Bank Card. The Channel Bank Card is used when DS0's (Voice Grade) are being handed off from an interoffice terminal to another ring or to the local distribution network. The input provided is associated with a single DS0 Channel Bank Card.

2.17.2 Default Input Value

Channel Bank Card
\$ 200

2.17.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.18 Fiber Repeater (OC3)

2.18.1 Definition

The list material cost associated with a Fiber Repeater (OC3).

2.18.2 Default Input Value

Fiber Repeater (OC3)
\$ 25,673

2.18.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.19 Fiber Repeater OC12

2.19.1 Definition

The list material cost associated with a fiber Repeater (OC12).

2.19.2 Default Input Value

Fiber Repeater OC12
\$ 50,509

2.19.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

2.20 Fiber Repeater (OC48)

2.20.1 Definition

The list material cost associated with a Fiber Repeater (OC48).

2.20.2 Default Input Value

Fiber Repeater (OC48)
\$ 91,707

2.20.3 Source

This is an INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used

2.21 Equipment Price Inputs – Other, Utilization, Discount, Units Required and DS1 System Capacity

2.21.1 Definition

The inputs are provided on the same basis as the material cost definition provided previously in sections 2.3 - 2.20.

Other includes the engineering and installation labor required to install the component of equipment.

Utilization is the percentage of capacity of the equipment that will be working. For the items shown as NA the model calculates a specific utilization on a ring by ring basis.

Discount is the manufacturer's discount percent off of the material list price to the Telco when purchased.

Units Required is the number of components required when costing out a SONET ring.

DS1 System Capacity is the component's capacity on a DS1 basis.

2.21.2 Default Input Value

Description	Other	Utilization	Discount	Units Required	DS1 System Capacity
iber Tip Cable (Per Fiber)	\$ 8	57.0%	20.0%	2	Varies
iber Patch Panel (Per Fiber)	\$ 13	57.0%	47.5%	2	Varies
ONET Terminal (OC3)	\$ 3,190	NA	41.5%	1	84
DS3 Card	\$ 384	67.0%	42.0%	1	28
DS1 Card	\$ 31	95.0%	51.0%	1	1
ONET Terminal (OC12)	\$ 4,950	NA	45.0%	1	336
OC3 Card	\$ 506	NA	35.0%	1	84
3 DS3 Card (OC12)	\$ 456	67.0%	36.0%	1	84
ONET Terminal (OC48)	\$ 11,040	NA	41.0%	1	1344
OC3 Card	\$ 514	NA	57.0%	1	84
3 DS3 Card	\$ 429	67.0%	56.0%	1	84
SX3 Cross Connect Shelf	\$ 97	81.0%	38.0%	1	448
DSX3 Cross Connect Card	\$ 41	67.0%	20.0%	1	28
SX1 Cross Connect Jack Field	\$ 785	80.0%	47.5%	1	56
hannel Bank Shelf	\$ 735	80.0%	20.0%	1	2
Channel Bank Card	\$ 32	80.0%	20.0%	1	0.041667
iber Repeater (OC3)	\$ 3,750	NA	52.0%	2	NA
iber Repeater (OC12)	\$ 4,500	NA	56.0%	2	NA
iber Repeater (OC48)	\$ 8,250	NA	46.0%	2	NA

2.21.3 Source

These inputs are INDETEC estimate based on consultation with BellSouth, Sprint, and US West subject matter experts. We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used

OTHER – We recommend that the user request specific studies to obtain this data. Telco engineering departments may have data that can be used.

UTILIZATION – We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.

DISCOUNT – We recommend that the user request specific studies to obtain this data from the local purchasing / procurement department. This data is considered confidential and is protected by purchasing contracts.

UNITS REQUIRED – We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used. Please note that the units required associated with the Fiber Repeater (OC3, OC12, OC48) are associated with the quantity of fibers required for a SONET ring, not the number of Fiber Repeaters.

DS1 SYSTEM CAPACITY – We recommend that the user request specific study to obtain this data. Telco engineering departments may have data that can be used.